

**REMARKS**

The Office Action mailed March 04, 2003, has been carefully reviewed. The amendments made as directed above are in response thereto.

Claims 17, 20, 25, 27, 28, 29, 30, 32 are currently amended, claim 38 has been added making claims 16 - 38 now pending in this application.

Claims 30 and 32 stand rejected under 35 U.S.C § 112, second paragraph.

Claims 16-18, 21-24 and 27 - 30 stand rejected under 35 U.S.C § 102(b) as allegedly anticipated by Gimm et al. (U.S. Patent No. 5,281,350).

Claims 16, 22, 23, 24 and 33 – 32 stand rejected under 35 U.S.C § 102(b) as allegedly anticipated by Brink (U.S. Patent No. 4,897,213).

Claims 17, 20, 24, 25 and 31 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Gimm et al. (U.S. Patent No. 5,281,350) in view of Rhodenbaugh (U.S. Patent No. 4,921,626).

Claims 19, 26, 34-35 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Gimm et al. (U.S. Patent No. 5,281,350) in view of Dillarstone et al. (U.S. Patent No. 4,181,623).

Claims 36-37 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Gimm et al. (U.S. Patent No. 5,281,350).in view of Dillarstone et al. (U.S. Patent No. 4,181,623) and Siklosi (U.S. Patent No. 4,287,080).

Claim 32 stands rejected under 35 U.S.C. § 103(a) as allegedly obvious over Gimm et al. (U.S. Patent No. 5,281,350).in view of Rhodenbaugh (U.S. Patent No. 4,921,626) and Yokoya et al. (U.S. Patent No. 4,985,323).

The claims as amended herein are fully supported by the application as originally filed. No new matter has been added. Reexamination, reconsideration, and allowance of the present application are respectfully requested in view of the foregoing amendments and the following additional remarks.

*Rejections Under 35 U.S.C. § 112*

Claims 30 and 32 stand rejected under 35 U.S.C § 112, second paragraph. According to the Examiner, method claim 30 improperly depended from compositional claim 26. In response, method claim 30 has been amended to recite a dependency to method claim 27. Also the misspelling of “monobuthyl” has been corrected in claim 32. In view of the foregoing, Applicant respectfully requests the withdrawal of this ground for rejection.

*Rejections Under 35 U.S.C. § 102*

Claims 16-18, 21-24 and 27-30 stand rejected under 35 U.S.C § 102(b) as allegedly anticipated by Gimm et al. (U.S. Patent No. 5,281,350). The Examiner asserts that Gimm et al. teaches a composition comprising 9.6% fluoride; 22.17% water and 30.7% glycerine (col. 4, lines 10-25). The Examiner further asserts that Gimm et. al. teaches an etching composition further comprising sugar as flow modifier, dye for printing and ammonium bifluoride. Applicant respectfully disagrees and traverses as follows.

Gimm et al. teaches etching compositions comprising a flow modifier, ammonium bifluoride, purified glycerine and ferric chloride. (Gimm et al. column 2, lines 9-17). Gimm et al. further teaches that **an amount of water of about 10% based on the total weight of Gimm et al.’s first and second solutions** may optionally be added to the etching composition. (Gimm et

al. column 3, lines 19-23). Based on the disclosure of Gimm et al. on column 2, lines 23 – 33,

Applicant has calculated that the composition of Gimm et al.'s etching composition is as follows:

<b>First Solution</b>	<b>Parts by Weight</b>		<b>w/w%</b>	
	<b>Low</b>	<b>High</b>	<b>Low</b>	<b>High</b>
Flow Modifier	25	35	16.67%	20.59%
Glycerine	100	100	66.67%	58.82%
Ammonium bifluoride	25	35	16.67%	20.59%
Total weight	150	170	100.00%	100.00%
<b>Second Solution</b>	<b>Parts by Weight</b>		<b>w/w%</b>	
Ammonium bifluoride	25	35	18.52%	23.33%
Glycerine	100	100	74.07%	66.67%
Ferric chloride	10	15	7.41%	10.00%
Total weight	135	150	100.00%	100.00%

<b>Mixture of First and Second Solutions:</b>								
	<b>Low (1:1)</b>		<b>High (1:1)</b>		<b>Low (1:2)</b>		<b>High (1:2)</b>	
Flow Modifier	16.67%	<b>8.33%</b>	20.59%	<b>10.29%</b>	16.67%	<b>5.56%</b>	20.59%	<b>6.86%</b>
Glycerine	140.74%	<b>70.37%</b>	125.49%	<b>62.75%</b>	214.81%	<b>71.60%</b>	192.16%	<b>64.05%</b>
Ammonium bifluoride	35.19%	<b>17.59%</b>	43.92%	<b>21.96%</b>	53.70%	<b>17.90%</b>	67.25%	<b>22.42%</b>
Ferric chloride	7.41%	<b>3.70%</b>	10.00%	<b>5.00%</b>	14.81%	<b>4.94%</b>	20.00%	<b>6.67%</b>
Total	200.00%	<b>100.00%</b>	200.00%	<b>100.00%</b>	300.00%	<b>100.00%</b>	300.00%	<b>100.00%</b>

Thus, Gimm et al. teach an etching composition comprising a 5.56% – 8.33% flow modifier, 62.75% to 71.60% glycerine, 17.59% to 22.42% ammonium bifluoride and 3.70% - 6.67% ferric chloride.

The Examiner cited the example on column 4, lines 10 – 25 of Gimm et al. in arriving at the Examiner's alleged composition. Although the cited portion of Gimm et al. did not explicitly mention the use of water in formulating the etching composition, Applicants have included the use of about 10% water as suggested by Gimm et al. in column 3, lines 19-22 to arrive at the following compositions.

**Example (Col. 4, lines 10-25)**

		<b>Kg</b>	<b>w/w%</b>
<b>First Solution</b>	Flow Modifier	0.90	19%
	Ammonium bifluoride	0.90	19%
	Glycerine	3.00	63%
<b>Second Solution</b>	Ammonium bifluoride	0.90	21%
	Glycerine	3.00	71%
	Ferric chloride	0.30	7%

		<b>w/o water</b>	<b>w/water</b>
<b>1:1 Mixture</b>	Flow Modifier	9.38%	8.52%
	Ammonium bifluoride	20.09%	18.26%
	Glycerine	66.96%	60.88%
	Ferric Chloride	3.57%	3.25%
	Water (dilution factor 0.90)		10.00%
<b>1:2 Mixture</b>	Flow Modifier	6%	5.68%
	Ammonium bifluoride	21%	18.67%
	Glycerine	65%	59.52%
	Ferric Chloride	5%	4.33%
	Water (dilution factor 0.90)		10.00%

Again, in the absence of water, the cited example in Gimm et al. teach an etching composition comprising about 6% - 9.38% flow modifier, 20.09% to 21% ammonium bifluoride, 65% to 66.96% glycerine and 3.57% to 5% ferric chloride. These percentages are consistent with the disclosure of Gimm et al. column 2, lines 23-33, illustrated above. With a 10% dilution factor utilizing water as suggested by Gimm et. al on column 3, lines 19-23, the etching composition taught by Gimm et al. now comprises 5.68% to 8.52% flow modifier, 18.26 – 18.67% ammonium bifluoride, 59.52% – 60.88% glycerine, 3.25% - 4.33% ferric chloride and 10% water. These numbers contrast markedly with Examiners assertion of 9.6% fluoride, 22.17% water and 30.7% glycerine. In particular, the above calculations show that Gimm et al.'s etching

composition comprise about twice the amount of glycerine, twice the amount of fluoride and half the amount of water asserted by the Examiner.

Contrasted with the glass etching composition of claim 16 of the present invention having 1-10 w/v% fluoride, 20-80 v/v% water and 20-80 v/v% water miscible organic solvent, it is clear that these ranges fall outside the scope contemplated by Gimm et al. Moreover, assuming a specific gravity of the water-miscible organic solvent of about 1, the glass etching composition as claimed in claim 16 of this invention comprises about 1-10 w/w% fluoride, 20-80 w/w% water and 20-80 w/w% of water-miscible organic solvent. Therefore, the glass etching composition as claimed by this invention is thoroughly different from the composition taught by Gimm et al.

Anticipation under Section 102 can be found only if a reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985). Here, the present invention is so substantially different from the composition disclosed in Gimm et al.'s that a rejection under Section 102 or Section 103 is believed improper. As such, Applicant respectfully asks that the Examiner withdraw the rejection of claim 16 and claims 17, 18, 21, 22, 23, and 24, which depend therefrom as being anticipated by Gimm et al.

With respect to independent method claim 27, Applicant has amended said independent claim to specifically recite the use of an etching composition constituted by the composition set forth in independent claim 16. As thus amended, for the reasons discussed above, claim 27 is neither anticipated nor rendered obvious by Gimm et al. Thus, even if, as alleged by the Examiner, Gimm et al. teaches a method of etching glass by way of the steps specifically enumerated in claim 27 of this invention, the incorporation of the compositional limitations of claim 16 renders claim 27 patentably distinct from the teachings of Gimm et al. As such,

applicants respectfully ask for the withdrawal of this ground for rejection as applied to not only claim 27, but also claims 28, 29 and 30, which depend therefrom.

In Paragraph 5 of the office action, the Examiner rejected independent claim 16 and dependent claims 22, 23, 24 and 33 as allegedly anticipated by Brink (U.S. Patent No. 4,897,213). The Examiner asserts that Brink teaches an etching composition having 11.2% ammonium bifluoride, 18.7% denatured alcohol or ethanol and 70.1% water. Applicant respectfully disagrees and traverses as follows.

Brink et al. is directed to cleaning agents particularly useful for removing weathering, micro-organisms and dirt from all granite structures and products. (Brink col. 1, lines 5-8). In effect, Brink is not unlike cleaning solutions containing ammonia, ethanol and water. Brink's cleaning agent is not reasonably designed to etch but to clean surfaces. Applicant contends that Brink is nonanalogous and thus not relevant as a prior art for the purposes of determining the patentability of the present invention. Moreover, Applicant would like to draw the Examiner's attention to the close-ended nature of Brink's cleaning agent. As asserted by Brink (column 2, lines 37 – 40), his cleaning agent **consists of** ammonium bifluoride, denature alcohol or ethanol and water. Unlike Brink, claim 16 refers to an etching composition **comprising** fluoride, water and water-miscible organic solvents. The close-ended nature of Brink's cleaning solution versus the open-ended nature of the Applicant's etching composition destroys the asserted identity between the two inventions. Moreover, the concentration of ammonium bifluoride recited in Brink falls outside the range claimed in the present invention. As such, Applicant asserts that his invention is patentably distinct from that of Brink. Applicant respectfully requests the

withdrawal of this ground for rejection as applied to independent claim 16 and claims 22,23, 24 and 33 depending therefrom.

*Rejections Under 35 U.S.C. § 103(a)*

Claims 17, 20, 24, 25 and 31 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Gimm et al. (U.S. Patent No. 5,281,350) in view of Rhodenbaugh (U.S. Patent No. 4,921,626). The Examiner asserts that Gimm et al. teaches applicant's claimed invention but is deficient with respect to the subject matter of claims 17, 20, 24, 25 and 31, said deficiency being cured by Rhodenbaugh. Applicant respectfully disagrees and traverses as follows.

As mentioned above, Gimm et al. does not anticipate claim 16 of the present invention nor claim 17 depending therefrom. In addition, the differences between Gimm et al. and the present invention are so substantial that an obviousness ground for rejection does not apply. Gimm et.al teaches the use of a flow modifier, ammonium bifluoride, glycerine and optionally water in compounding etching compositions. Nowhere in Gimm et al. was it suggested nor taught that the broad range of water-miscible organic solvents disclosed and claimed in the present invention could be used. Also and particularly, the amount of ammonium bifluoride required in Grimm et al.'s etching composition (about 18% w/w) is roughly twice the highest amount of fluorides required by the present invention (1-10% w/v). No where in Grimm et al. was it suggested that an etching composition comprising water, water miscible organic solvents and the comparatively low amount of fluoride of the present invention could successfully be used.

Thus, not only does Gimm et al. not render the present invention obvious, the deficiencies in Gimm et al. are not cured by Rhodenbaugh. As admitted by the Examiner, Gimm and Rhodenbaugh's composition are very close in composition. By implication, Rhodenbaugh's composition is substantially distinct from that of the present invention. Thus, Rhodenbaugh and Gimm et al. combined cannot be used to arrive at the inventions disclosed in claims 17, 20, 24, 25 and 31 of the present invention. Applicants have modified claim 17 to particularly point out that the gelling agent of interest is one that can gel the glass etching composition of the present invention. Similarly, claim 25 has been amended to delete, among other things, xanthan gum as a gelling agent of interest.

Additionally, Applicants assert that Grimm et al. and Rhodenbaugh are not properly combinable. To be properly combined, "the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure." In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). "The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination." In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Notwithstanding these requirements, the Examiner has failed to point to anything in the prior art that would suggest the combination it now asserts to be obvious. Moreover, no such motivation or suggestion can be found in either Grimm et al. or Rhodenbaugh to support the examiner's combination. Accordingly, the combination is improper. Applicant asserts that claim 17 and claims 20, 24, 25 and 31, depending therefrom are patentably unobvious over the Examiner's asserted combination and respectfully asks that this ground for rejection be withdrawn.



In paragraph 9 of the Office action, claims 19, 26, 34-35 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Gimm et al. (U.S. Patent No. 5,281,350) in view of Dillarstone et al. (U.S. Patent No. 4, 181,623). The Examiner asserts that Gimm et al. teach the applicant's invention and that Dillarstone cures the deficiency in Gimm with respect to incorporation of surfactants in etchant compositions. Applicant respectfully disagrees and traverses as follows.

As has been demonstrated above, the present invention is neither anticipated by nor obvious in view of Gimm et al. Not only that, the deficiencies in Gimm cannot be cured by combination with Dillarstone et al. – an invention in a nonanalogous art. Dillarstone et al. is directed to cleaning agents and teaches the use of surfactants for cleaning glass or glazed ceramic articles, particularly stains left by water and water droplets. Dillarstone's glass cleaning agent do not etch glass. As such, it is improper to combine Grimm and Dillarstone and even if the combination can be made, the combined art would still not arrive at the inventions of claims 19, 26, 34-35, not only in terms of components, but also in terms of their relative compositions. As such, Applicant respectfully asks that this ground for rejection be withdrawn.

In Paragraph 10 of the office action, the Examiner rejected claims 36-37 under 35 U.S.C. § 103(a) as allegedly obvious over Gimm et al. (U.S. Patent No. 5,281,350).in view of Dillarstone et al. (U.S. Patent No. 4,181,623) and Siklosi (U.S. Patent No. 4,287,080). The Examiner asserts that Gimm et al. and Dillarstone et al. teach the Applicant's invention and that the deficiency in terms of ampholytic and cationic surfactants is cured by further combination with Siklosi. Applicant respectfully disagrees and traverses as follows.

As has been shown above, Gimm et al. does not teach nor suggest the present invention. Also, Dillarstone and Siklosi belong to the nonanalogous area of cleaning compositions as

opposed to etching compositions. The asserted combinations are improper. And were the asserted combination proper, the combined art would still not teach nor suggest the present invention. In particular, the combination would still not teach nor suggest the concentration of the components of the etching compositions of the present invention. Accordingly, Applicant respectfully requests the withdrawal of this rejection.

In Paragraph 11 of the Office action, the Examiner rejected claim 32 under 35 U.S.C. 103(a) as unpatentable over Gimm et al. in view of Rhodenbaugh and Yokoya et al. According to the Examiner, Gimm and Rhodenbaugh teach the applicant's claimed invention except for the deficiency with respect to the subject matter of claim 32, said deficiency being cured by Yokoya et al. Applicant respectfully disagrees and traverses as follows.

As mentioned above, Gimm and Rhodenbaugh do not teach the present invention. Not only is there no motivation to combine the two references, their disclosures do not suggest the likelihood of success in doing so. Moreover, were Gimm and Rhodenbaugh combined, the present invention would still be patentably unobvious over the combination. Further, Yokoya et al. is directed to an electrophotographic printing plate – a totally nonanalogous area of art. Applicant contends that Yokoya is therefore not properly combinable with Gimm and Rhodenbaugh. Even if the combination were made, claim 32 would still be patentably distinct from the putative combination because the concentrations of the components of the etchant would be patentably distinct between the combination and the present invention. As such, Applicant requests the withdrawal of this ground for rejection.

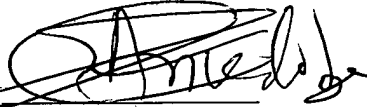
**CONCLUSION**

In view of the foregoing remarks, Applicant submits that there is no basis for applying the previous rejections to the pending claims and withdrawal of the rejections is respectfully requested. The claims are believed to be in condition for allowance, and Applicant earnestly solicits from the Examiner early notification of allowability.

Should the Examiner have any questions or believe a personal or telephonic interview may be in order, he is invited to contact the undersigned at his earliest convenience.

Respectfully submitted,

SHANKS & HERBERT

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